

REMARKS/ARGUMENTS

Claims 21 - 26 remain in the application.

Original claims 1 -20 and 27 – 33 have been canceled

Applicant's **claimed** invention (amended claim 21) is directed to an apparatus for severing a length of pipe comprising several essential characteristics:

- (1) a tubular housing having a barrel space between a resiliently biased detonator housing and a selectively removable end plug;
- (2) a first electric detonator positioned in the detonator housing to resiliently bear upon one end of the explosive column;
- (3) a second electric detonator positioned in the end plug to bear upon the other end of the explosive column;
- (4) a capacitive firing cartridge within the tubular housing; and,
- (5) electrical conduits between the capacitive firing cartridge and the electric detonators that need not be disconnected when the end plug is detached from the tubular housing for inserting or extracting an explosive column.

There are several unobvious advantages to the synergistic combination described by Applicant's amended claim 21, one of which is found in Applicant's specification ¶ [0023].

"An unusually high voltage surge is required to detonate the EBW detonator (or EFI).... The system is relatively impervious to static discharges, stray electrical fields and radio frequency emissions".

Other unobvious advantages to the combination are described in specification ¶ [0026] and [0027].

"it is a design intent for the invention to obviate the need for field connections. Without explosive pellet material in the outer housing bore 14, EBW detonators 32 and 66 are the only explosive material in the assembly..... Consequently, without explosive material in the tubing bore 14, the assembly as illustrated by FIG.1 is

safe for transport with the EBW detonators 32 and 66 connected in place.

The significance of having a severing tool that requires no detonator connections at the well site for arming cannot be minimized."

These characteristics of Applicant's invention permit the cutter housing to be constructed and primed prior to transport from a remote assembly plant. The only electrical connection that must be made at the well site is to the wire-line conductor.

The explosive column of Applicant's invention is an assembly of numerous, small value, explosive pellets that may be safely transported as separate packages. At or near the well site, a precisely prescribed number of the pellets may be structurally combined as a singular unit prior to combination with the pre-primed housing. This structural combination of pellets is performed independently of the housing for absolute visual verification that the correct explosive value and alignment relationship between the pellets is assembled. Notably, the assembled column of high explosive pellets has no proximate detonation means until actual and final insertion into the housing barrel.

The Examiner's Action of August 24, 2006 required information of Applicant or Applicant's Assignee under 37 CFR §1.105 concerning "the names of any products or services that have incorporated the claimed subject matter". Responsive to this information requirement, Applicant is submitting herewith a paper copy of information publicly displayed on the present Assignee's website at www.titanspecialties.com. The enclosed information may be accessed by the Examiner from the Titan Specialties homepage by "clicking" on the product line category "**Energetics (Shaped Charges, Detonating Chord and Detonators)**". From the "Energetics" menu page, click on the dot under the "Technical" category to the right of the "Title" category "**Drill Collar Severing Tools**". Within this website is a description of each and every feature found within the scope of Applicant's claims.

The Examiner also required Applicant, under MPEP §704.11(a)(S)(8), to "provide support for the added limitations in claim 1". Claim 1 was cancelled by

Applicant's Preliminary Amendment "A" that was submitted on January 21, 2004, the present application filing date. The original independent claim 1 was replaced by independent claim 21. Presumably, therefore, the Examiner is referring to the Amendment "C" iteration of claim 21 as compared to the Preliminary Amendment (A) iteration of the same claim. Respectfully, the only limitation conceivably added by the Amendment "C" iteration to claim 21 was to expressly incorporate an "end plug at an opposite end of said tubular housing". The "end plug" 40 is expansively described in Applicant's specification ¶[0024] as a "nose plug 40". This same element 40 was characterized as a selectively removable "socket housing" in Preliminary Amendment claims 23 – 25. For the Examiner's convenience, Applicant has enclosed a comparison matrix for all elements encompassed by claims 21 – 26 respective to the Preliminary Amendment and Amendment C iterations. Included are the corresponding drawing reference number and specification paragraph wherein the respective element is described.

Applicant's reply herein to the Examiner's 37 CFR §1.105 requirement is submitted in candor and good faith belief to be a full and accurate response. Should the Examiner find the need for additional information not published on the Assignee's website as described above, Applicant will be pleased to provide such information to the best of his ability upon the Examiner's description of exactly what information he needs.

In view of the present amendments and, Applicant respectfully requests the Examiner's favorable reconsideration and allowance of claims 21 - 26 as patentably novel over the prior art.

Date: October 10, 2006

Respectfully Submitted,


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Enclosures

CERTIFICATE OF MAILING UNDER 37 CFR §1.8(a)

I hereby certify that this correspondence, along with any referred to as enclosed or attached, is being deposited with the United States Postal Service as Express Mail, Label No. EQ 656131595 US, Postage prepaid, in an envelope addressed to: Mail Stop: AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on this 10th day of October, 2006.

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